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A SERVICE FOR INDUSTRY BUSINESS ENGINEERING AND RESEARCH
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Dear Sir:

New company, U.S. Nuclear Corp., which will supply isotopes and offer services in the nuclear field, has been set up in Burbank, Calif. Products that will be offered include alpha, beta, gamma, and neutron sources; industrial tracers; and shielding equipment used in conjunction with radioisotopes. Services the company will supply include consulting, training, analyzing, and decontaminating.....Plans for the acquisition of Foster Wheeler Corp., by North American Aviation, Inc., have been dropped, the firms have stated in a joint announcement by J. L. Atwood, president, North American, and W. L. Martwick, president, Foster Wheeler. Original plans had called for merger of the two companies, both of which are active in the nuclear energy field. (Other BUSINESS NEWS, p.5 this LETTER.)

New professional society, Institute of Nuclear Materials Management, has been organized to "establish and encourage the use of prescribed standards in the management of nuclear materials and to certify qualified individuals in the nuclear materials management field". The new society is comprised of people in government, industrial, and educational facilities in the U.S. where nuclear fuel and special reactor metals are used. President is R. F. Lumb, of Quantum, Inc.; W. B. Thomas, of Westinghouse Electric, is secretary, and S. Kops, of the USAEC's nuclear materials branch, is treasurer.

Deadline has been extended to Oct. 20, 1959 for proposals for nuclear power projects under the EURATOM power development program. Original deadline had been Sept. 1, 1959. Five European groups have filed letters of intent to participate in this program (this LETTER, June 9, 1959, p.4). Objectives of program are to install within the EURATOM community (France, W. Germany, Holland, Luxembourg, Italy, Belgium) in the next four to six years approximately one million kw of nuclear energy-generated electrical capacity. (Other PROPOSALS, CONTRACTS, BIDS ASKED, p.2 this LETTER.)

Keel laying ceremonies of England's first nuclear powered submarine last fortnight marked start of construction of the Dreadnought at the shipbuilding division of Vickers-Armstrong, Ltd., Barrow-In-Furness. Propulsion unit will be of Westinghouse Electric design (Skipjack-class) with further technical information being furnished (under U.S.-British agreement) by Electric Boat division of General Dynamics Corp., and other U.S. industrial firms. Probable cost of the Dreadnought is £20,000,000.....The U.S.'s first ballistic-missile nuclear powered submarine, the George Washington, had its launching last fortnight at the Groton, Conn., yards of Electric Boat. It is the first of nine designed to fire the 1,500 mile Polaris missile from a submerged or surfaced position. Westinghouse Electric was prime contractor for the reactor, the missile launcher, and the missile itself. Total cost of the George Washington has been placed at $100,000,000; the 5,400-ton craft is some 380-ft. overall. (Other MANUFACTURERS' NEWS, p.3 this LETTER.)

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ATOMIC ENERGY CONTRACT NEWS...

BIDS ASKED: Bids have been asked by the USAEC's New York Operations office for reprocessing three lots of uranium scrap material located at Lynchburg, Va.; Hicksville, N.Y.; and Concord, Mass. Bid deadline is June 29.

CONTRACTS AWARDED: Research and development contracts totaling approximately $1.5 million have been awarded by the USAEC, to promote industrial uses of radioisotopes and radiation. Receiving contracts were: Air Reduction Co., Murray Hill, N.J., $87,700; Alloyd Research Corp., Watertown 72, Mass., $49,700; Army Pictorial Service, L.I. City, N.Y., $88,000; Associated Nucleonics, Inc., Garden City, L.I., New York, $79,000; Battelle Memorial Institute, Columbus, Ohio, (3 contracts) $130,550; Booz-Allen Applied Research, Inc., Kenilworth, Ill., $33,200; Consolidation Coal Co., Pittsburgh 19, Pa., $74,700; General Motors Corp., Indianapolis, Ind., $15,000; Goodyear Tire & Rubber Co., Akron, Ohio, $46,600; Isotopes, Inc., Westwood, N.J., $45,000; William H. Johnston Laboratories, Lafayette, Ind., (2 contracts) $116,700; M.I.T., Cambridge, Mass., $115,000; Midwest Research Institute, Kansas City 10, Mo., $14,900; Nuclear-Chicago Corp., Chicago, Ill. (2 contracts) $84,000; Nuclear Science & Engineering Corp., Pittsburgh, Pa., $122,000; Purdue Research Foundation, U. of Purdue, Lafayette, Ind., $40,000; Radiation Applications, Inc., New York, N.Y., (2 contracts) $116,500; Rensselaer Polytechnic Institute, Troy, N.Y., $100,000; Research Triangle Institute of N.C., Durham, N.C., $160,400; Textile Research Institute, Princeton, N.J., $14,200.

Low bid of $37,409 was submitted by Bradbury & Stamm Construction Co., Albuquerque, for construction work at the USAEC's South Albuquerque Works, which are operated by ACF Industries, Inc...Apparent low bid of $53,002 was made by Robert K. Burns Construction Co., Albuquerque, for work on utility lines and modifications to two existing structures at the USAEC's Sandia Laboratory.

CONTRACT NEWS: Subcontract has been let to Carburundum Co., Niagara Falls, N.Y., by Nuclear Development Corp. of America, to perform certain work on development of plutonium fuel elements. Nuclear Development Corp. holds prime contract from USAEC to study the feasibility of a nuclear reactor using plutonium fuel.

RESEARCH PROJECTS...

NEW RESEARCH FACILITY PLANNED: A research and development facility is planned at Santa Barbara, Calif., by the Boston firm of Edgerton, Germeshausen & Grier. The company, manufacturer of high speed precision control and measurement equipment, is a prime contractor in the nuclear weapons and rocket propulsion programs of the USAEC. The company is now working on diagnostic instrumentation tests on Project Rover, the USAEC program to develop a nuclear rocket propulsion apparatus for intergalactic space travel. Its work at Santa Barbara will be in the realm of nuclear, missile and space technologies.

NUCLEAR MATERIALS ASSISTANCE GRANTS BEING MADE: University of Michigan and Texas A.&M. College are to receive nuclear materials assistance grants from the USAEC under the Commission's reactor assistance program. This will provide for University of Michigan a grant of $24,400 for fabrication of 32 fuel elements containing approximately 4.5 kg of uranium-235, and $4,731 waiver of charges for uranium-235 to July 1, 1960. For Texas A.&M., a grant will be made of $26,718 for fabrication of 35 fuel elements containing about 4.5 kg of uranium-235; $3,250 for fabrication of neutron sources; and $2,318 waiver of charges for uranium-235 to July 1, 1960.

RESEARCH CENTER TO BE OPENED: New research center of Picker X-Ray Corp., was opened in Cleveland, Ohio, last week. Facilities planned for the center are a large radioisotope encapsulation unit, a radiography laboratory, and equipment for research and development in the field of nuclear instrumentation and X-ray diffraction.

PEOPLE...in nuclear work...

Ronald C. Vickery has been named senior research scientist of the research chemicals division, Nuclear Corp. of America, Burbank, Calif. Dr. Vickery had been most recently with Stanford Research Institute.

Saul J. Harris has been appointed technical director of Atomic Accessories, Inc., Bellerose, N.Y. Mr. Harris had been assistant manager of technical services, Atomic Industrial Forum, Inc., New York.

Val J. Ashby has joined the technical staff of Ramo-Wooldridge division of Thompson Ramo Wooldridge, Inc. Dr. Ashby's background includes some thirteen years of experimental nuclear research and particle accelerator development.

NEW PRODUCTS, PROCESSES, INSTRUMENTS...for nuclear lab & plant...

NEW PRODUCTS FROM MANUFACTURERS: Two new instruments, composed of an electronic translator and printer, are designed to operate with this firm's new series of Tracer/Matic scalers and automatic sample changers. Model SC-87 Auto/Printer furnishes a printed tape containing sample number, elapsed time, and total counts. Model SC-88 Auto/Computer prints this same information and in addition computes and prints the count rate of each sample. All sample information is printed on the tape, eliminating need for letter codes.--Tracerlab, Inc., Waltham 54, Mass.

New apparatus called Metabolic Tracer Unit enables studies to be made of the over-all metabolic fate of tracer-labeled compounds fed to small animals.--Volk Radio-Chemical Co,. Chicago, Ill.

Proportional counter tube, of high sensitivity, for detecting themal neutrons, is now in production by this manufacturer. The tube contains three individual proportional counters, each filled with boron trifluoride enriched to 96% with boron-10. Operation is at 200 volts, and up to ambient temperatures of 175 deg. F.--Westinghouse Electric Co., Pittsburgh, Pa.

PRODUCT NEWS: Price reductions on all its catalogue listed carbon-14 labeled compounds have been put into effect by New England Nuclear Corp., Boston 18, Mass. The new prices reflect the drop in price of barium carbonate-C-14 by Oak Ridge National Laboratory, and have been lowered by 5 to 20% depending upon the price decrease in the raw material.

Structurally-sound beryllium sheet material has been successfully fabricated in a joint project of The Martin Co., Baltimore, and Nuclear Metals, Inc., Cambridge, Mass. Although the work was done under an Air Force contract, with projected use of such sheet stock in high speed space craft, nuclear reactor applications are envisioned for the material.

New selection of low-cost nuclear science training aids is now being offered by Atomic Accessories, Inc., Bellerose 26, N.Y. Items are offered individually, or as part of 3 complete kits. The kits include choice of scaler or ratemeter; elapsed timer; tube stand and G-M detectors; absorber sets; and others.

Method of disposing of radioactive wastes containing fission products such as strontium-90 and cerium-37 by trapping them in a glassy mass was recently described by A. R. Bancroft, Atomic Energy of Canada, Ltd., at the 42nd annual conference of the Chemical Institute of Canada in Halifax, N.S. The hot liquid radioactive waste, concentrated in a nitric acid solution, is added to an unheated mixture of 85% nepheline syenite (a complex silicate mined in Ontario) and 15% lime. This gives a gelled slurry which fuses upon heating to 1350 deg. C., Mr. Bancroft pointed out. No unusual precautions need be observed in burying the glassy mass, he noted, and maximum leaching of the glass by water removes only about one millionth of its mass per year.

A wide range of radiation measuring equipment and radiation sources is to be supplied free of charge to the Government of Brazil, by the International Atomic Energy Agency, Vienna. The equipment is being supplied as part of the technical assistance the Agency is giving Brazil in setting up a service to measure radiation and radioactivity. This is in connection with Brazil's purchase and use of radioactive material. Equipment supplied will be used by National Institute of Technology and the Institute of Biophysics, University of Brazil. On the basis of international bids, the IAEA will buy the equipment from firms in Austria, Belgium, France, Germany, Norway, U.K. and the U.S. It will include radiation sources, ionizing chambers of various types, Geiger and scintillation counters, radiation monitors, and dosimeters.

Vanadium metal with lowered content of gaseous impurities is now being offered by Union Carbide Metals Co., division of Union Carbide Corp. As produced by the company's fine metals and chemical department at Niagara Falls, hydrogen content has been cut by 90% and nitrogen content by 50%. (Vanadium's largest potential is believed in the field of atomic energy. It may be used as a thin-walled tube to clad uranium fuel elements as operating temperatures of the newer fast-breeder reactors are raised to achieve higher efficiency. Properties recommending such applications are its resistance to corrosion by liquid sodium coolant; its moderately low neutron capture cross-section; and the fact that it does not form brittle or low melting eutectic alloys with uranium).

ATOMIC ENERGY PATENT & TRADE-MARK DIGEST...

PATENTS ISSUED June 2, 1959 to PRIVATE ORGANIZATIONS: (1) Device for measuring the titre of a running thread. F. Linsert, A. Prietzschk, inventors. No. 2,889,463 assigned to Farbenfabriken Bayer AG., Leverkusen, Germany. (2) Shielding manipulator for radioactive material W. G. Ruehle, Jr., inventor No. 2,889,464 assigned to Lermac, Inc., Oakland, Calif.

PATENTS ISSUED June 2, 1959 to GOVERNMENTAL ORGANIZATIONS: (1) Calutron source. F. F. Oppenheimer, inventor. No. 2,889,462 assigned to USAEC. (2) Electric pulse generator. R. W. Buntenbach, inventor. No. 2,889,465 assigned to USAEC. (3) Nuclear reactor fuel pump. W. G. Cobb, inventor. No. 2,888,878 assigned to USAEC.

PATENTS ISSUED June 9, 1959 to PRIVATE ORGANIZATIONS: (1) Tube support in X-ray irradiation apparatus. L. Huszar, inventor. No. 2,890,349 assigned to Talalmanyokat Ertekesito, Budapest, Hungary. (2) Adjustable housing for radiation devices. Stewart R. Tongret, inventor. No. 2,890,351 issued to inventor of record.

PATENTS ISSUED June 9, 1959 to GOVERNMENTAL ORGANIZATIONS: (1) Reduction of plutonium values in an acidic aqueous solution with formaldehyde. C. M. Olson, inventor. No. 2,890,098 assigned to USAEC. (2) Recovery of uranium from low grade uranium bearing ores. H. B. Rhodes, W. F. Pesold, J. M. Hirshon, inventors. No. 2,890,099 assigned to USAEC. (3) Production of plutonium from plutonium fluoride. R. D. Baker, inventor. No. 2,890,110 assigned to USAEC. (4) Method for preparing normorphine. H. Rapoport, M. Look, inventors. No. 2,890,221 assigned to USAEC. (5) Nuclear reactor. L. A. Ohlinger, E. P. Wigner, A. M. Weinberg, G. J. Young, inventors. 2,890,158 assigned to USAEC. (6) Ion beam focusing means for calutron. J. G. Backus, inventor. No. 2,890,337 assigned to USAEC. (7) High voltage regulator. B. T. Wright inventor. No. 2,890,338 assigned to USAEC. (8) Calutron. W. M. Brobeck, E. J. Lofgren, R. L. Thornton, inventors. No. 2,890,340 assigned to USAEC. (9) Ion producing mechanism. F. F. Oppenheimer, inventor. No. 2,890,339 assigned to USAEC. (10) Calutron plant arrangement. L. O. Waite, inventor. No. 2,890,341 assigned to USAEC. (11) Particle accelerator. T. Ohkawa, inventor. No. 2,890,348 assigned to USAEC.

PATENTS ISSUED June 16, 1959 to PRIVATE ORGANIZATIONS: (1) Gamma ray well logging apparatus. R.G. Piety, inventor. No. 2,791,166 assigned to Phillips Petroleum Co.

PATENTS ISSUED June 16, 1959 to GOVERNMENTAL ORGANIZATIONS: (1) Separation by adsorption. C. S. Lowe, inventor. No. 2,890,932 assigned to USAEC. (2) Recovery of uranium values from uranium bearing raw materials. E. J. Michal, R. R. Porter, inventors. No. 2,890,933 assigned to USAEC. (3) Plutonium alloys. W. Chynoweth, inventor. No. 2,890,954 assigned to USAEC. (4) Precision time-delay generator. B.J. Carr, V. D. Peckham, inventors. No. 2,891,155 assigned to USAEC. (5) Portable thulium x-ray unit with separable universal mounting means. E. W. Coleman, L. H. Krohn, inventors. No. 2,891,167 assigned to U.S. Secretary of the Army. (6) Calutron. W. E. Parkins, inventor. No. 2,891,161 assigned to USAEC. (7) Calutron receiver. S. W. Barnes, inventor. No. 2,891,162 assigned to USAEC. (8) Calutron. A. F. Clark, inventor. No. 2,891,163 assigned to USAEC. (9) Portable source of radioactivity. R. C. Goertz, K. F. Ferguson, E. W. Rylander, L. M. Safranski, inventors. No. 2,891,168 assigned to USAEC.

TRADE-MARK NEWS: Mark "Dynacon" SN-60,550 is to be issued Nuclear-Chicago Corp., Chicago, Ill., for vibrating capacitor electrometers for electrical measurements and ionization chambers for use with them.

NEW BOOKS & OTHER PUBLICATIONS...

Directory of Nuclear Reactors: Vol. 1, Power Reactors. Covers 36 power reactor projects, world-wide. Includes a number of projects about which no information had previously been generally available. 214 pages. -- International Atomic Energy Agency, Karntner Ring, Vienna I, Austria. ($3.50)

Radiation Biology & Cancer. Edited by staff of University of Texas, M. D. Anderson Hospital, and Tumor Institute. Papers presented at 12th annual symposium on fundamental cancer research. 493 pages.--University of Texas Press, Austin, Texas. ($8.50)

Proceedings of the Symposium on Advances in Tracer Applications of Tritium, held in New York Oct. 31, 1958, have been published by the sponsoring firms. Copies of the 67 page report may be obtained from New England Nuclear Corp., 575 Albany St. Boston 18, Mass. This firm, with Atomics Associates, Inc., and Packard Instrument Co., Inc., sponsored the symposium.

ATOMIC ENERGY BUSINESS NEWS...

INTEREST BOUGHT BY U.S. FIRM IN FRENCH NUCLEAR FUEL COMPANY: Sylvania-Corning Nuclear Corp., Bayside, N.Y., has bought an interest in the French company CERCA (Compagnie pour l'Etude et la Realisation de Combustibles Atomiques). Sylvania-Corning will hold this interest on a joint basis with three French concerns: St. Gobain, Pechiney, and S.F.A.C. Opportunities presented by the EURATOM market persuaded Sylvania-Corning management that such a commercial nuclear fuels production organization would be a profitable operation. (In Europe, Sylvania-Corning holds contracts to suppply fuel elements for the Belgian materials and engineering test reactor; the RCN test reactor at Petten, Holland; the Melusine reactor at Grenoble; and the Triton reactor at Sontenay-aux-Roses, near Paris. It will also supply fuel elements for the Government test reactor in Israel.) (CERCA was set up in 1957 by St. Gobain, leading manufacturer of glass and chemicals, and S.F.A.C., large producer of steel and alloys and heavy machinery. Pechiney, chemical and metallurgical manufacturer, obtained an interest in 1958. Headquarters are in Paris.)

MANUFACTURERS MAKE RECENT SALES OF NUCLEAR EQUIPMENT: Sale of a 10-million electron volt tandem Van de Graaff accelerator has been made by High Voltage Engineering Corp., Burlington, Mass., to Universitet Institut for Teoretisk Fysik, Copenhagen, Denmark. The institute is under the direction of Prof. Niels Bohr, whose theoretical nuclear research there began in the late 1930's. It is hoped with this new machine to study nuclear energy levels in heavier nuclei. (This is the third tandem accelerator to be ordered from High Voltage by a nuclear research center in Europe. The first 10-million volt tandem was installed at the Chalk River, Ontario laboratories of Atomic Energy of Canada, Ltd., in 1958.)...Recent sales made by Fenn Manufacturing Co., Newington, Conn., of equipment for nuclear energy work have been to Phillips Petroleum Co., and General Electric Co. Fenn will supply the research and development department of Phillips' atomic energy division, Idaho Falls, Idaho, with its model 4-085 two-high/four-high rolling mill and a model 4F swaging machine. For GE's atomic products division, San Jose, Calif., Fenn will supply a model V4-065 convertible rolling mill and model 1F and 4F swaging machines. And for GE's Hanford atomic products operation, at the plutonium fabrication pilot plant there, Fenn will supply two specially engineered 25,000-lb. hooded draw benches. For Hanford's Laboratories Fenn will supply a model 2H combination hydroforner and a model 5F swaging machine.

NUCLEAR POWER PLANT TO BE BUILT: The nuclear power plant of Consumers Power Co., Michigan electric utility moved a step forward last week with filing by the company of petition with Michigan Public Services Commission for permission to go ahead with the $30 million project. The plant, to be built at Big Rock Point between Charlevoix and Petoskey, Michigan, would use a direct cycle, forced circulation, boiling water unit. General Electric Co. will furnish the nuclear portion of the plant, which will be built by Bechtel Corp., San Francisco, as architect, prime contractor, and engineer-constructor. It is hoped to have the plant in operation by 1962. The utility, and GE people feel that plant electrical generating capacity may be increased from 50,000 kw to 75,000 kw by engineering refinements incorporated into the plant after its operations begin at the lower figure in 1962.

ATOMIC ENERGY FINANCIAL NEWS...

PUBLIC STOCK OFFERING CANCELLED: Basic Atomics, Inc., New York, has temporarily dropped its proposed public offering of 444,246 outstanding shares of common stock. The firm said its action was due to a derivative stockholders suit in Delaware and New York challenging the validity of the securities which were to be offered. (Basic Atomics, which has developed a new low cost process for separation of lithium from its ores, has given option to Texas Gulf Sulphur to investigate the economic feasibility of the process. The company, guided by P. E. Landolt, also owns lithium and uranium properties in the U.S. and Canada.)

CHANGES IN STOCKHOLDINGS SHOWN: Changes in stockholdings of officers of firms in the nuclear field include recent sale by Richard S. Morse, president, National Research Corp., of 21,600 shares of common stock. Holdings of Mr. Morse after the sale were 17,400 shares.

Sincerely,

The Staff,
ATOMIC ENERGY NEWSLETTER

June 23, 1959